This listing of the claims replaces all prior versions in the application.

Listing of Claims:

1. (Currently Amended) A method of performing brain therapy, comprising:

placing a subject in a main magnetic field of an MRI scanner during an MRI guided therapy;

introducing into the subject's brain a combination imaging and therapeutic probe, the probe including a magnetic resonance imaging antenna and an electrical energy application element;

acquiring a first magnetic resonance image from the antenna of the combination probe;

acquiring a second magnetic resonance image from a surface coil;

combining the first and second magnetic resonance images to produce a composite image;

positioning the combination probe within the brain with guidance from at least one of the images; and

delivering electrical energy to the brain from the electrical energy application element of the combination probe thus positioned.

2. (Original) The method of claim 1, wherein the combination probe is positioned with guidance from the composite image.

3. (Original) The method of claim 1, further comprising:

acquiring a plurality of first images;

acquiring a plurality of respective second images; and

combining each of the plurality of first images with its respective second image to produce a plurality of respective composite images.

4. (Original) The method of claim 3, further comprising constructing a three-dimensional rendering of the brain from a plurality of the composite images.

5. (Original) The method of claim 3, wherein the images are generated in real time or near-real time.

6. (Original) The method of claim 3, wherein the images are generated at a rate of at least 10 frames per second.

7. (Original) The method of claim 1, wherein the combination probe further comprises at least one diagnostic electrode, and the method further comprises measuring an electrical potential with the diagnostic electrode.

8. (Original) The method of claim 7, further comprising guiding a mapping procedure with at least one of the images.

9. (Original) The method of claim 7, further comprising constructing an electrical activation map of the brain with potentials thus measured.

10. (Original) The method of claim 7, further comprising positioning the combination probe with guidance from the composite image to measure the electrical potential.

11. (Original) The method of claim 1, further comprising applying an RF ablative current to the subject from the electrical energy application element.

12. (Original) The method of claim 1, further comprising locating an anatomic target on at least one of the images.

13. (Original) The method of claim 1, further comprising introducing a magnetic resonance contrast agent to enhance at least one of the images.

14. (Currently Amended) The method of claim 1, wherein the magnetic resonance imaging antenna and the electrical energy application element are separate components of the combination probe and reside at a distal end portion of the combination probe so that both the magnetic resonance imaging antenna and electrodes reside inside the brain during a therapy procedure.

15. (Currently Amended) A system for performing brain therapy, comprising:

a magnetic resonance machine having a surface coil and means for generating a main magnetic field;

a combination imaging and therapeutic probe, the probe including a magnetic resonance imaging antenna and an electrical energy application element;

means for acquiring a first magnetic resonance image from the antenna of the combination probe when the antenna is inside the brain;

means for acquiring a second magnetic resonance image from the surface coil;

means for combining the first and second magnetic resonance images to produce a composite image;

means for positioning the combination probe within the brain with guidance from at ~~lest~~ least one of the images; and

means for delivering electrical energy to the brain from the electrical energy application element of the combination probe thus positioned.

16. (Currently Amended) The system of claim 15, wherein the combination probe further comprises a diagnostic electrode configured to acquire electrical signals of local tissue when the brain is in a high magnetic field and exposed to RF signals associated with an MRI scanner, wherein the diagnostic electrode is in communication with an RF filter configured to inhibit MR scanner induced noise in the acquired electrical signals from the diagnostic electrode.

17. (Original) The system of claim 15, wherein the magnetic resonance imaging antenna and the electrical energy application element are separate components of the combination probe.

18. (Original) The system of claim 15, further comprising:

means for acquiring a plurality of first images;

means for acquiring a plurality of respective second images; and

means combining each of the plurality of first images with the respective second image to produce a plurality of respective composite images.

19. (Currently Amended) The system of claim 18, further comprising means for generating real-time images during the MRI guided procedure.

20. (Currently Amended) A system for performing brain therapy using an MRI scanner, comprising:

a combination imaging and therapeutic probe, the probe including a magnetic resonance imaging antenna and an electrical energy application element on a distal end portion of the probe, the magnetic resonance imaging antenna configured to receive MR signals from local tissue *in vivo* when in position inside a subject;

means for acquiring a magnetic resonance image from the antenna of the combination probe;

means for positioning the combination probe within the brain with guidance at least in part from the image; ~~and~~

means for delivering electrical energy to the brain from the electrical energy application element of the combination probe thus positioned; and

an RF attenuation filter circuit in communication with the means for delivering electrical energy for selectively attenuating an RF signal in the probe generated by the MRI scanner.

21. (Currently Amended) An MRI combination imaging and interventional probe adapted to cooperate with an MRI scanner, the probe including a magnetic resonance imaging antenna configured to receive MR signals *in vivo* from local tissue when positioned inside the brain and a plurality of electrodes, at least one configured to detect local electrophysiological signals and at least one configured to apply stimulation or ablation energy to local tissue, the probe sized and configured for insertion into a brain of a patient during an *in vivo* MRI guided therapeutic treatment.

22. (Currently Amended) An MRI probe according to Claim 21, further comprising at least one RF filter circuit residing between each electrode and an interface with the MRI scanner, the at least one RF filter configured to suppress an MRI scanner induced signal from being transmitted by the probe ~~an MR imaging signal~~ while allowing RF ablative current to be delivered to the at least one electrode.

23. (Previously Presented) An MRI probe according to Claim 22, wherein the at least one RF filter circuit comprises an inductor and capacitor.

24. (Previously Presented) An MRI probe according to Claim 21, in combination with an MRI scanner, wherein the MRI scanner generates a composite image using signal data from the probe antenna and signal data from an external surface coil, and wherein the MRI scanner is configured to generate the composite image in substantially real time to prove composite images used during an interventional procedure to guide placement of a distal end portion of the MRI probe.

25. (New) A method according to Claim 1, further comprising:

attenuating a frequency induced in the probe by an MRI scanner, wherein the attenuated frequency corresponds to a radio frequency emitted by the MRI scanner.

26. (New) A method according to Claim 1, wherein the combination imaging and therapy probe further comprises an electrophysiological sensing element, the method further comprising:

acquiring electrical signals of the brain from the electrophysiological sensing element; and

filtering radiofrequency interference induced by the MRI scanner from the acquired electrical signals.